



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,718	04/05/2006	Hong-Jae Lee	HIPO008US	4996
23413 7590 01/21/2011 CANTOR COLBURN LLP 20 Church Street 22nd Floor Hartford, CT 06103				
EXAMINER SZEWCZYK, CYNTHIA				
ART UNIT		PAPER NUMBER		
1741				
NOTIFICATION DATE		DELIVERY MODE		
01/21/2011		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptopatentmail@cantorcolburn.com

Office Action Summary

Application No.

10/574,718

Applicant(s)

LEE ET AL.

Examiner

CYNTHIA SZEWCZYK

Art Unit

1741

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13, 16-20 and 39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13, 16-20 and 39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-940)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 29, 2010 has been entered.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 13, 17, 20 and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by HEITKAMP (US 4,956,217).

HEITKAMP teaches producing a laminate structure of a honeycomb core wherein HEITKAMP describes the honeycomb core as being a three dimensional network structure having open pores (col. 2 lines 40-45) and can therefore be considered a sponge. HEITKAMP teaches that the sponge may be a polymer (col. 2 lines 43-45). HEITKAMP teaches that the sponge is impregnated in a solution, drained (which is considered equivalent to the dewatering step), and partially cured (col. 3 lines 39-42). HEITKAMP teaches that the solution comprises sodium silicate (col. 2 lines 66-68). HEITKAMP teaches that the coated sponge is later fully cured (col. 3 lines 45-46),

which is equivalent to the drying step. HEITKAMP teaches that the partial curing step may also occur in a carbon dioxide atmosphere (col. 3 line 66 – col. 4 line 1).

Regarding claim 17, HEITKAMP teaches that the solution may comprise a urea based adhesive (col. 4 lines 16-22) which is an organic adhesive.

Regarding claim 20, HEITKAMP teaches that the solution may also comprise boric acid or thermosetting resin (col. 4 lines 17-19, col. 4 lines 29-40).

Regarding claim 39, since the products of the instant claim 39 and HEITKAMP undergo the same process, they are considered identical products.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over HEITKAMP (US 4,956,217).

HEITKAMP teaches a method of making a laminate structure of a honeycomb core. HEITKAMP teaches that additives are incorporated into the solution to “alter viscosity, density, cohesion, adhesion, solubility and the like”. It would have been obvious to one of ordinary skill in the art to add a surfactant to the solution because it would alter the cohesion characteristics of the solution and HEITKAMP suggests including additives that alter characteristics of the solution.

Regarding claim 19, although HEITKAMP is silent to using a water repellant, HEITKAMP teaches that the result may be used in marine vehicle designs (col. 1 lines

7-9) therefore it would have been obvious to one of ordinary skill in the art to incorporate water repellants into the product to optimize it for marine vehicle use.

6. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over HEITKAMP (US 4,956,217) in view of GILL (Environmentally Safe Binders for Agglomeration).

HEITKAMP teaches a method for preparing a ceramic body. HEITKAMP is silent to adding sodium silicofluoride.

GILL teaches additives that may be safely added to sodium silicate binders, which are used in the solution of HEITKAMP. GILL discloses that the silicate binder may include a number of setting agents (table 2) including sodium silicofluoride. It would have been obvious to one of ordinary skill in the art to add sodium silicofluoride to the solution of HEITKAMP because GILL discloses that the setting agents help create a stronger bond in the sodium silicate agglomerate (Agglomeration with Silicates).

Response to Arguments

7. Applicant's arguments with respect to claims 13, 16-20 and 39 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CYNTHIA SZEWCZYK whose telephone number is

(571)270-5130. The examiner can normally be reached on Monday through Friday 9 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Daniels can be reached on (571) 272-2450. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CS

/Matthew J. Daniels/
Supervisory Patent Examiner, Art Unit 1741